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was fitted up, by means of which a stream of atmospheric air could be heated to  $260^{\circ}$  C. in a globular glass vessel of the capacity of 5 litres. On leaving this vessel, the air was passed through a U-tube, one metre in length, whose sides were moistened internally with water, while the tube itself was cooled by being immersed in a vessel of cold water. On passing atmospheric air in a favourable state through this apparatus, at the rate of three litres per minute, the test-paper was distinctly tinged in two or three minutes, provided no heat was applied to the glass globe. But when the temperature of the air, as it passed through the globe, was maintained at  $260^{\circ}$  C., not the slightest action occurred upon the test-paper, however long the current continued to pass. Similar experiments with an artificial atmosphere of ozone, that is, with the air of a large chamber containing a small quantity of electrolytic ozone, gave precisely the same results. On the other hand, when small quantities of chlorine or nitric acid vapour, largely diluted with air, were drawn through the same apparatus, the test-paper was equally affected, whether the glass globe was heated or not.

From these experiments I consider myself justified in concluding that the body in the atmosphere, which decomposes iodide of potassium, is identical with ozone.

XIV. "On the Anatomy of *Balaenoptera rostrata*, Fab." By ALEXANDER CARTE, M.A., M.D., F.R.C.S.I., F.L.S., M.R.I.A., &c., and ALEXANDER MACALISTER, M.D., L.R.C.S.I., Demonstrator of Anatomy, Royal College of Surgeons, Ireland, &c. Communicated by W. H. FLOWER, Esq. Received June 20, 1867.

(Abstract.)

In this paper the authors give an account of the dissection of a young female of the Lesser Fin or Piked Whale, which was captured off Clougher Head, Co. Louth, Ireland, on the 8th of May 1863.

After describing its external form, and giving accurate measurements of its various parts, the authors point out some differences between the relative sizes and positions of the organs of the animal as contrasted with similar parts of those of the same species which have been recorded by previous writers, especially as regards the position of the dorsal fin, which appendage seems to vary in situation in different individuals; and show, that consequently no value, as indicative of species, ought to be attached to its relative position.

This is followed by a description of the osteology of the animal; and attention is drawn to the fact that the body of the axis vertebra is composed, in part, by the displaced body of the atlas, showing that what at present forms the upper half of the centrum of the axis, is in reality the centrum of the atlas.

The myology of the different regions of the animal has been closely investigated, especially the rudimentary muscles of the paddle, which latter the authors have minutely examined.

The anatomy of the mouth, pharynx, and blowholes is described, and the mechanism by which the functions of respiration and deglutition are performed. In connexion with the larynx, a remarkable muscular pouch is mentioned as existing, which appendage is supposed by the authors to be accessory to the act of expiration, serving a somewhat similar office to that of the air-reservoir in a double-action bellows. Directly in front of the glottis there existed a peculiar hood-like fold of mucous membrane arranged in such a way as to allow of its being drawn over the orifice, and so prevent the entrance of all foreign substances into the respiratory tract during the act of deglutition.

The tongue was found fixed, as far as its tip, by a thick frænum. The lateral walls of the submaxillary cavity were thrown into folds, thereby admitting of considerable distention, this arrangement being peculiarly adapted to the feeding requirements of the animal. The number of baleen plates found in the specimen was 280 on each side.

The muscles for acting on the blowholes were arranged in three strata, the superficial and deepest layers being used in opening, and the intermediate one for closing the nasal canals.

The anatomy of the eye and ear is fully described in the original paper, together with that of the digestive, nervous, and vascular systems; in connexion with this last, remarkable vascular retia were found, situated in the axillary, submaxillary and cervical regions.

In the preceding brief abstract the writers have endeavoured to give an outline of their numerous observations on the anatomy of this Cetacean, believing that it presents many features of novelty and interest not hitherto recorded.

XV. "On the Distribution of the Fibres in the Muscular Tunics of the Stomach in Man and other Mammalia." By JAMES BELL PETTIGREW, M.D. Communicated by GEORGE BUSK, Esq. Received June 20, 1867.

(Abstract.)

The author of the present memoir has examined in succession the stomach of the several domestic animals, the Whale, Porpoise, Bear, Puma, Sloth, Cæbus Monkey, Howling Monkey, Orang-Otang, Chimpanzee, and particularly Man, both in the fœtal and adult state.

The plan adopted in the examination was to distend the viscus immediately after its removal from the body with water or air, and view it as a transparent object; to blanch the stomach by maceration, and distend it with plaster of Paris, tinted with blue, or to stain the parietes with carmine and inject with white plaster, the object in either case